UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,538	01/07/2002	Takeshi Ono	14601032	4896

21171 7590 11/16/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
CURS, NATHAN M	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/036,538	ONO ET AL.	
	Examiner	Art Unit	
	Nathan Curs	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolf (US Patent No. 6741812).

Regarding claim 1, Wolf discloses a wavelength multiplexing apparatus comprising: a multiplexing section for multiplexing and/or demultiplexing optical signals to/from a wavelength-multiplex signal transferred through an optical multiplex transmission line, the optical signals having different wavelengths from each other and being individually transmitted or received by a plurality of signal conversion apparatuses (col. 2, lines 31-36 and 48-60); a reference signal receiving section for receiving a reference optical signal modulated according to a reference signal which is outputted from a specific one of said plurality of signal conversion apparatuses, and is a reference to synchronization in all or a part of said plurality of signal conversion apparatuses (col. 2, lines 45-47 and col. 3, lines 6-18); and a reference signal distributing section for distributing the received reference optical signal to all or a part of said plurality of signal conversion apparatus (col. 2, lines 3-8).

Regarding claim 3, Wolf discloses the wavelength multiplexing apparatus according to claim 1, wherein: said reference signal receiving section receives reference optical signals

individually supplied from a plurality of specific signal conversion apparatuses among said plurality of signal conversion apparatuses (col. 2, lines 20-27); and said reference signal distributing section distributes one of the reference optical signals received by said reference signal receiving section (col. 2, lines 3-8).

Regarding claim 4, Wolf discloses the wavelength multiplexing apparatus according to claim 1, wherein; said reference signal receiving section receives reference optical signals which are individually supplied from said plurality of specific signal conversion apparatuses and have a correspondence in advance with all or a part of said specific signal conversion apparatuses and said optical multiplex transmission line (col. 2, lines 20-27 and col. 3, lines 51-63); and said reference signal distributing section distributes the individually received reference optical signals to said signal conversion apparatuses corresponding to the reference optical signals or said optical multiplex transmission line (col. 2, lines 3-8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US Patent No. 6741812) in view of Endriz et al. ("Endriz") (US Patent No. 5657153).

Regarding claim 2, Wolf discloses the wavelength multiplexing apparatus according to claim 1, but does not disclose that said specific signal conversion apparatus wavelength-multiplexes said reference optical signal to an optical signal to be transmitted from the specific signal conversion apparatus and that said reference signal receiving section receives said

reference optical signal by demultiplexing or extracting said reference optical signal from said optical signal in wavelength region. Endriz discloses an amplifier for a WDM system where a signal is converted from electrical to optical and then wavelength multiplexed as part of an amplifier pump signal, and demultiplexed at the received end, to provide communication using the amplifier pump signal (col. 1, lines 23-32 and col. 4, line 7 to col. 5, line 17). It would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the synchronization signals between the nodes of Wolf by modulating WDM amplifier pump signals, as taught by Endriz, to overcome the limitation of denied switching of synchronization wavelengths in Wolf.

Regarding claim 6, Wolf discloses a wavelength multiplexing apparatus comprising: a multiplexing section for multiplexing and/or demultiplexing optical signals to/from a wavelength-multiplex signal transferred through an optical multiplex transmission line, the optical signals having different wavelengths from each other and being individually transmitted or received by a plurality of signal conversion apparatuses (col. 2, lines 31-36 and 48-60); a reference signal receiving section for receiving a reference optical signal modulated according to a reference signal which is outputted from a specific one of said plurality of signal conversion apparatuses, and is a reference to synchronization in all or a part of said plurality of signal conversion apparatuses (col. 2, lines 45-47 and col. 3, lines 6-18); and a reference signal distributing section for distributing the received reference optical signal to all or a part of said plurality of signal conversion apparatuses (col. 2, lines 3-8). Wolf does not disclose that said multiplexing section includes an optical amplifier for optically amplifying a wavelength-multiplex signal transferred through said optical multiplex transmission line and all or a part of optical signals demultiplexed from the wavelength-multiplex signal and that said reference signal distributing section distributes said received reference optical signal by modulating pumping light to be used

for said optical amplification, by the reference optical signal. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Endriz with Wolf as described above for claim 2.

Conclusion

5. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (800) 786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pairdirect.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. Bello

AGUSTIN BELLO
PRIMARY EXAMINER